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Twenty-Five Year History of the Kansas Coyote Damage Control Program

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In the 1968 legislative session, an appropriate was made to Kansas State University to hire a predator and rodent control specialist. I was hired for this position on July 1, 1968. During August, 1968, I traveled to Missouri and spent a week working with Mr. Bob Smith, a long-time employee of the Missouri Conservation Department's Extension-Trapper program. He taught me how to teach people to trap coyotes.

I began the program by responding to every complaint within 24 hours and by teaching people who experienced a problem how to use techniques and most importantly, left necessary equipment with the people following training. In this way, the people could immediately put the equipment to work. Prior to that time, people often needed to order equipment before using the methods taught.

Here is how the program works:

When a Kansas livestock producer has a problem with coyotes, that producer can contact the nearest county Extension office and request help. Between 1968 and 1975 there was only one specialist and between 1975 and 1985, there were two Extension wildlife damage control specialists in Kansas. Since 1985 to this date, there has been only one specialist.

We have a well-equipped truck and carry all of the tools necessary to teach producers how to catch coyotes and hopefully reduce, if not prevent, further losses. We try to respond to calls quickly, arriving at the site of loss within 3 days' time. We either meet with groups of producers who gather at a site, or most often we work with an individual on the site where the losses occurred. We work at the convenience of the producer, often early in the morning or later in the evening. Actually, these are better times to work in teaching because of the habits of coyotes, as they tend to move around more at these times. At first we talk to the producer(s) about the problem. Asking questions such as: when did the last kill occur; when was one before that; did you see the coyote(s); do you see coyote(s) often; where do you see them most often; are there any stray dogs around; do you let your pet dog(s) run loose; do you pen your sheep at night; is there a light over the pen; how many

ewes do you have; how long has it been since you had losses prior to this time; all of these questions and more would probably be asked. We have to be good listeners and once we have an idea of the situation, then we ask the producer to walk around with us, looking for sign and at the dead livestock, if present, (see figure 1).

Keys to Success

• Quick response
Be a good listener
• Work flexible hours 1 Be considerate of producers
Make follow-up call soon after first visit
• Keep in touch with producers

Figure 1

We point out coyote tracks and likely travel routes of the coyote. Upon examination of the dead livestock, we point out the teeth marks, and other signs typical of a coyote kill. Sometimes we find the cause of death was not a coyote. We record data on a standardized recording sheet prior to leaving the site.

Typically, a next step we would discuss would be coyote capture methods. We encourage the use of methods which are as efficient, safe, economical, humane, and selective as possible. Generally, that would be the use of leg-hold traps or neck snares. In 1984 we added the use of M-44s. Other tools presently used might include the use of dogs or calling. In other cases, we might suggest a strobe-lite siren to scare the predator away. But usually a leg-hold trap is chosen, in which case, we would begin to point out good set locations and explain why those are good places to set traps. We teach producers to rely on common sense and to take advantage of the natural instincts of the coyotes. We avoid setting traps next to carcasses of recently killed livestock. But in cases where the coyote returns to a kill, we advise setting the traps upwind and a few yards away.

The specialist sets the first set, with the producer(s) looking on. We carefully explain each step. Especially, each trap part, its function, and how to bury the traps in the ground, how to bed the traps, how to place the trap pan cover under the jaws of the trap and over the pan. We teach producers to use a ground cloth to kneel on while placing the traps in the set. We do not wear gloves to teach coyote trapping. Most trap setting is in the warmer months when dry conditions prevail. We do not boil or dye new traps before setting. We do advise dying rusty traps so that they will close quickly and gloves are useful to prevent getting stickers in your hands. We teach producers to stake the traps down and fasten the trap chains to the stake using a lap link, welded shut. We prefer to use two 3N traps at a set. The use of two traps at a set increases the odds of a catch.

We sift soil over the entire set, covering traps, trap chains, and stake. We use coyote urine on a visual attraction placed between the two traps as a draw to the trap set location. We teach producers to set the traps in flat bare areas upwind from the normal travel route being used by the coyotes in the area of the kills. We show how to use stepping sticks, to guide the coyote's foot onto the trap pan.

If the set is likely to be subjected to freezing weather, we recommend mixing 1/4 table salt to 3/4 dry soil over and around the traps, to prevent freezing which would prevent the traps from closing. We use a rib bone, wire or curved stick to even out and level the soil over the buried traps. We place 1 to 2 tablespoons of coyote urine concentrated on a cow chip or stick. The set should be checked each morning. Kansas law requires this and also anyone setting traps or snares to affix a tag to each trapping device with the person's name and address on each tag.

After the set is completed, we discard all unused soil, scattering it so as not to be conspicuous. The site of the set should be left as natural as possible. We teach the use of only one set; the scent post set. We believe this is the most selective set to use for coyotes in Kansas. The location of the set is actually more important than how the traps are set.

After the first set is completed, the producer sets the next traps. The specialist looks on making suggestions where necessary. The third set is also placed by the producer. Generally, three sets are all that are used per farm. We advise the producer that we cannot teach anyone how to become an expert coyote trapper, that comes with experience. We advise that in the long run, it would be easier to avoid a coyote problem than to rely on coyote traps. When a coyote is caught, it is shot and the traps reset in the same place. Even if a non-target animal is caught, we recommend resetting the trap(s) in the same set. Losses often stop after one adult coyote is removed. Sometimes, no coyotes are caught, however, the losses stop. We generally work an average of four hours with each producer we train. We leave printed information with the producer which describes the particular methods we taught that producer how to use. We believe these important steps will lead to a successful program. In Kansas, we know these points are important for success.

We either sell all equipment needed by the producer at the time of training or leave the equipment with the producer on demonstration. The producer can either purchase or return the equipment later. We try to contact the producers two weeks after training to determine if they were successful in reducing the losses. If not, we do return and assist the producer in a second training session.

Experience has shown us that many of the coyotes killed are actually the coyote responsible for the loss. The benefits from this work goes on for many years. These coyotes could have perpetrated the killing habit in the neighborhood. These same people who have learned these techniques presumably will benefit substantially each year from their ability to reduce or stop coyote damage when and if it occurs again, so this will be an annual benefit over the years ahead. Many of these producers will train others.

Coyote damage, I believe, is more a function of opportunities for the coyotes and that in some situations there is less opportunity than in others. It seems to me to be prudent to consider man's contribution to unknowingly providing that opportunity for coyotes to conflict

with man's enterprises. When there are no restrictions on the supply of easy prey (sheep) and no known way to control coyote populations, then it seems reasonable that sheep need protection from coyotes. I believe that every successful coyote damage control program will have to have a part that is devoted to preventive management education.

In 1969, publications were written about "How to Call Coyotes" and "Controlling Coyote Damage". Also a two volume Wildlife Damage Control Handbook was complied and delivered to every County Extension Office in the State. This served as a ready reference for all Extension workers to use when advising about wildlife damage problems.

Early in 1969, the title of the rodent and predator control specialist was changed to Wildlife Damage Control Specialist. This may have been the first time that title was used for an Extension Specialist.

Early on, an effort was made after assisting a livestock producer to obtain their opinion as to how they viewed the program and their success or failure in reducing losses.The second full year (July 1, 1969 -June 30, 1970) 250 livestock producers, who were trained, caught 520 coyotes, 21 wild dogs, and 8 bobcats in that year after being trained (see figure 2).

Keys to Success

- A total of 90 cards were sent
- A total of 66 were returned
- Losses dropped from $20,000 to $5,000 following training
- A total of 49 cards had useful information on them such as:
    - The losses of 28 producers' were stopped
    - The losses of 18 producers' were reduced
    - The losses of 3 producers' failed to return

Figure 2

In 1970, the legislature in Kansas abolished the enabling legislation on payments for by state and local governments the bounty on coyotes and closed the poison mixing station at KSU (see figure 3).

1970 Survey

1 A total of 50 people returned their surveys
- A total of 38 producers' losses were stopped
- A total of 12 producers' losses were reduced
- A total of 520 coyotes were caught
- Also caught were 21 dogs and 8 bobcats
- The losses were reduced from $18,400 to 54,000

Figure 3

During the 1970-71 fiscal year many prairie dog and pocket gopher demonstrations were conducted. Classes in the art of coyote calling were started. Urban bird roost schools were held and city officials trained in bird dispersal methods. Bird damage to growing milo crops were studied in Harvey county.

During 1971-72 fiscal year 12 wildlife damage control leaflets were prepared. One hundred and forty-seven farm visits were made to places where coyote problems were reported. A total of 337 coyote traps were sold following demonstrations. Eighteen TV presentations were made. A large urban bird roost in Topeka was moved (see figure 4).

1972 Survey

- The investigator was Wilton Thomas
- There were a total of 139 producers surveyed
- There were a total of 1,091 coyotes caught
- There was 85% approval of the program

Figure 4

During 1972-73 the specialist developed a Memorandum Of Understanding and this agreement was signed the first time between the State Wildlife Agency and the Extension Service regarding WDC matters. A super 8 movie was filmed about WDC in Kansas. KSU suggested and started the Great Plains Wildlife Damage Control Workshop. The Great Plains Agricultural Council agreed to co sponsor the event. KSU developed a 500 member volunteer group of coyote hunters and trained them so that livestock producers could receive the volunteer's assistance. We cooperated with the USF&WS on a national index to coyote abundance.

During the 1973-74 fiscal year the Kansas legislature enacted the Kansas Wildlife Damage Control Act after the legislature in 1970 removed the 1949 enabling law that mandated the KSU WDC activities.

Kansas Wildlife Damage Control Act

An Act relating to Kansas State University of agriculture and applied science; concerning wildlife damage control.

Be it enacted by the Legislature of the State of Kansas:

Section 1. As used in this act: (a) "Section" means the section of wildlife damage control created by section 3 of this act; and (b) "director" means the director of the Cooperative agricultural Extension Service of Kansas State University of agriculture and applied science.

Section 2. The purpose of this act is to provide for the development of a statewide educational program for the control of damage caused by wildlife.

Section 3. There is hereby created in the existing cooperative agricultural extension service of Kansas State University of agriculture and applied science a section of wildlife damage

control. Employees of the section shall be known as "Extension Specialists in Wildlife Damage Control," shall be appointed in accordance with K.S.A. 1972 Supp. 76-715 and shall be under the general supervision of the director.

Section 4. The section shall: (a) Develop a state-wide Extension educational program for the control of damage caused by wildlife; (b) instruct farmers and ranchers in effective methods of controlling damage caused by wildlife which will enable the farmers and ranchers to more effectively protect their crops, poultry and livestock; (c) conduct studies on ways to prevent agriculture losses caused by wildlife, including non-lethal methods of control; (d) assist and devote time to youth education programs which will increase the understanding of the management of wild animals; and (e) supply individuals, at cost, with materials not readily available from local commercial sources for use in damage control work.

Section 5. In connection with its duties, the section shall cooperate with the Kansas forestry, fish and game commission.

Section 6. Subject to the approval of the president of Kansas State University and the State Board of Regents and within available, appropriations, Extension Specialists in wildlife damage control shall be furnished vehicles and the necessary materials and equipment to carry out their duties and assignments and they shall be paid for travel expense necessarily incurred, including lodging, meals and miscellaneous expense while away from their assigned headquarters.

Section 7. This act shall take effect and be in force from and after its publication in the statute book.

(Passed Kansas Legislature - 1973 Session)

During 1974-75 fiscal year the EPA remade the original super 8 film in a 16mm format, for nation-wide distribution. The new film title was " A Matter of Understanding" and the subject matter was about coyotes preying on livestock. KSU started a study to determine to what extent sheep husbandry methods relate to coyote problems. This was the first study of its kind ever conducted. Developed slide sets about WDC methods.

In the same year, KSU (along with several other states) evaluated use of a cyanide device called an M-44 for use in coyote damage control.

During 1975-76 fiscal year, legislature increased appropriations to KSU for a second WDC Specialist in Kansas. Ed Boggess accepted this job on July 1, 1975 and was stationed in Garden City. Kansas is 400 miles wide east to the west and 200 miles deep north to south. It was intended to cut travel time by placing the record position in western Kansas. His area included one half the state of Kansas, the western half. In 1976, a survey showed falling coyote problems with 92 percent approval of the Extension WDC program among users. Producers caught an average of 6 coyotes after training. Sheep losses were down to less than 1% of all sheep lost to predators. Boggess and Henderson gave 47 presentations on furbearers harvest

methods during this year. About this time interests in coyote/fur trapping was building as fur prices were heading to all time high records. A study on the use of electric fence was conducted in cooperation with USF&WS-ADCResearch. This marked further cooperation between state and federal parties involved in ADC work.

Federal grants for states to operate and expand their state programs were offered by Federal ADC in 1975-76 fiscal year. Grants were given only to South Dakota and Washington amounting to $300,000 each. We requested 74,000 dollars (see figures 5, 6, and 7).

1976 Survey

- The investigator was Ed Boggess
- There were a total of 63 producers surveyed
- Fifty-two percent reported that their losses stopped
- Eighty percent (of those who didn't stop their losses) reported a decrease in losses after training
- Seventy-nine percent reported a reduction in their sheep losses
- Seventy-six percent reported a reduction in their cattle losses
- Eighty-nine percent reported a reduction in swine losses
- Fifty-three percent reported a reduction in poultry losses
- Forty-two percent showed someone else how to catch coyotes
- Ninety-two percent approved of the Extension program
- There is a 6.2 ratio of coyotes caught per producer

Figure 5

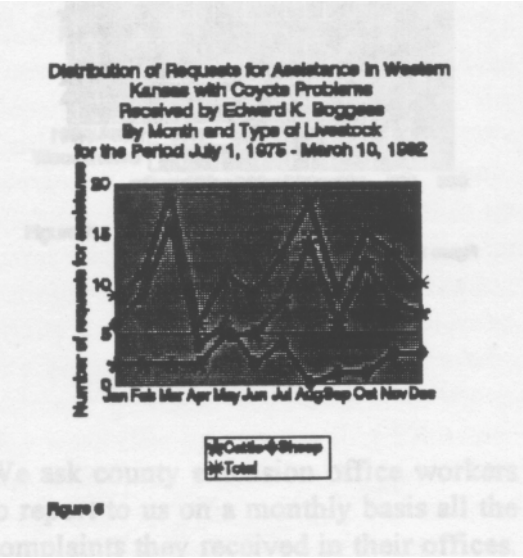


Figure 6

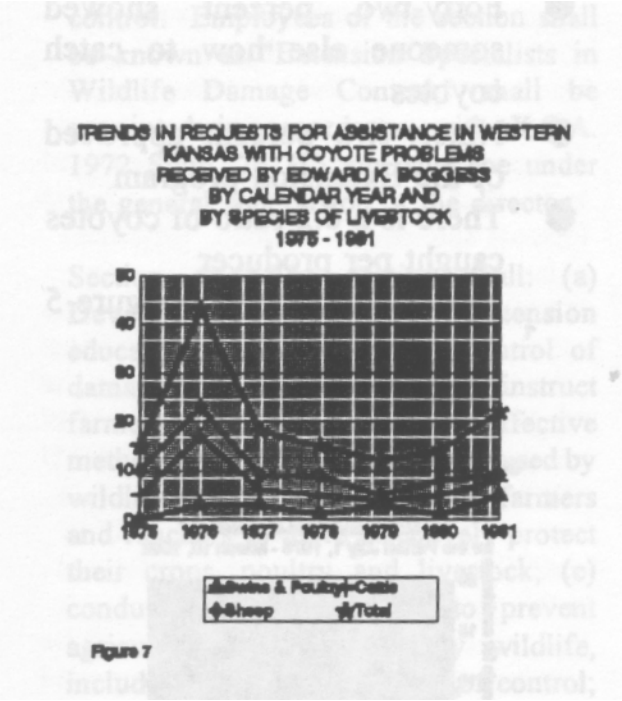


Figure 7

During 1976-77 fiscal year we conducted agent training schools after revising the WDC handbook and expanding its use to all the Great Plains States where we sold over 3000 copies. We taught 12 furtrapping schools where 858 people attended. We developed 4-H Furharvester project. There were 2952 4-H members enrolled in Wildlife Projects awe had started. We presented 16 radio programs about urban bird damage control situations.

During 1977-78, we initiated a relationship with Federal-ADC group in Nebraska. Together we held joint meeting regarding crow damage control in Stafford county. For the first time in many years, we included Federal-ADC people in our State MOU with other state and federal agencies. We found a black-footed ferret skull in 1978 in Gove county, but the ferret may have been dead for twenty years. We conducted 15 four hour furtrapping schools around the state. In this winter Kansas people harvested an estimated 110,000 coyotes and sold the pelts. Furs sold in Kansas this winter brought in 8.9 million dollars to the furharvesters. We conducted 14 state-wide educational programs aimed at reducing the TGE problem in swine herds due to starlings. At this time, 1978, date we had developed 23 WDC publications. Over 100,000 publications of "How to Call a Coyote" had been distributed.

During the 1978-79 fiscal year, the number of coyote problems reported to ow office were at an all-time low of 19. We published a booklet about how to prevent coyote problems, first of its kind. Coyote pelt prices peaked at around 5100 each. We collected the jaw bones of 4250 coyotes and researched a new method of aging coyotes.

We conducted several beaver damage control schools. Assisted in the establishment of a state organization of furharvesters. We pioneered efforts in furharvester education which later resulted in the enactment of mandatory furharvester education course in Kansas.

During 1979-80 we served as advisors to other states where fur-trapping educational programs were being developed. Mississippi Kite problems increased for the first time in SW Kansas. We produced a radio program

once a month. We held seven furtrapping schools. And we revised the WDC handbook.

During the 1980-81 fiscal year we held agent training around the state. We conducted 11 furtrapping schools, 15 prairie dog control schools, and we responded to 17 beaver damage problems.

We conducted 11 prairie dog control schools. We taught a 5 day class to the sheep science class at Colby Jr. College. We taught a WDC class at KSU on Saturdays for a semester. We presented information on 20 TV programs and 20 radio programs. We wrote parts of 8 pesticide training manuals. We created and gained sponsorship for county extension wildlife award. We also traveled to six states advising with regard to WDC and fur trapping education.

During the 1982-83 fiscal year Ed Boggess resigned and moved to Minnesota. We began approved M-44 program in coyote damage control. We started a WDIS program, Wildlife Damage Information System. Up until this time no one ever tried to figure out how extensive wildlife damage problems

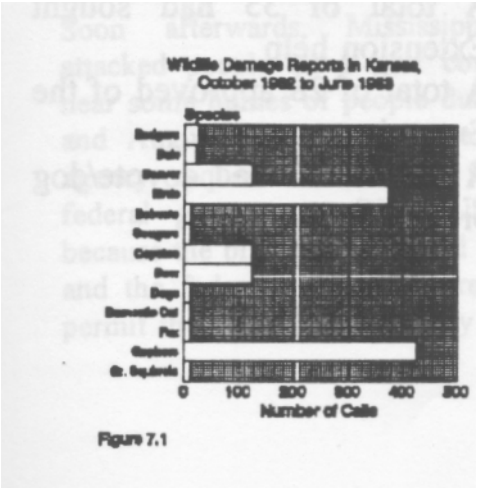


Figure 7.1

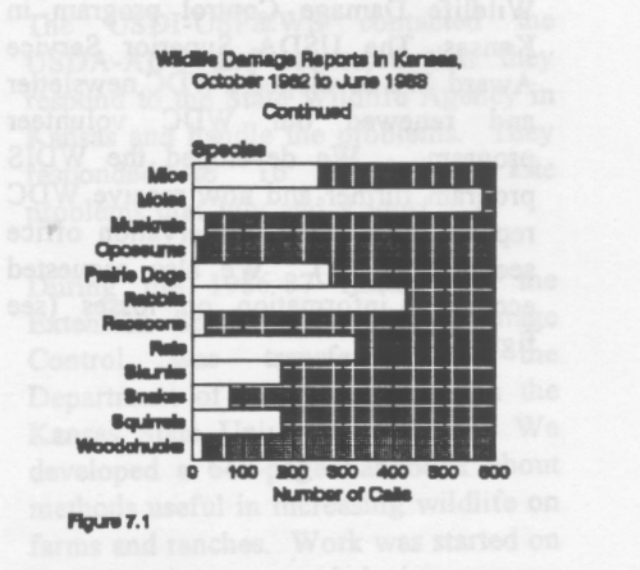
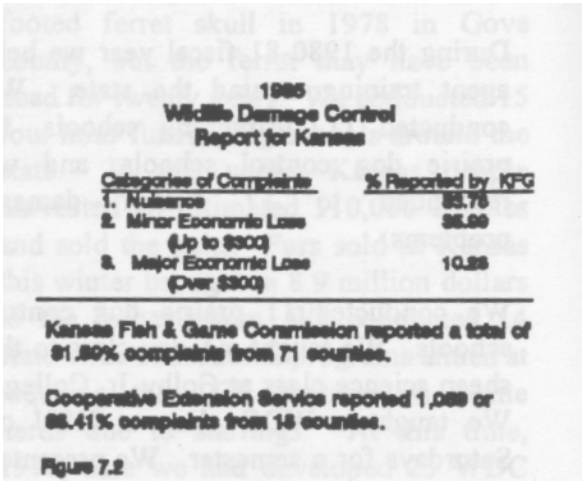


Figure 7.1

We ask county extension office workers to report to us on a monthly basis all the complaints they received in their offices. From this we estimated that there were more than 3000 calls received in this one year in 105 county offices. The most frequent animal involved were moles and pocket gophers.

During the 1983-84 fiscal year we hired Bill Andelt as the western Kansas WDC Specialist to replace Boggess. During this year the Kansas legislative research council studied WDC in Kansas. The Nebraska group of the USF&WS-ADC recommended at a Kansas legislative hearing that Kansas should continue with its successful program of Extension WDC.

During 1984-85 fiscal year, the second highest award given by the USDA for the development of the Extension Wildlife Damage Control program in Kansas. The USDA Superior Service Award. We developed a WDC newsletter and renewed our WDC volunteer program. We developed the WDIS program further and now receive WDC reports for wildlife conservation office see figures 7.1). We also requested economic information on losses (see figures 7.2).



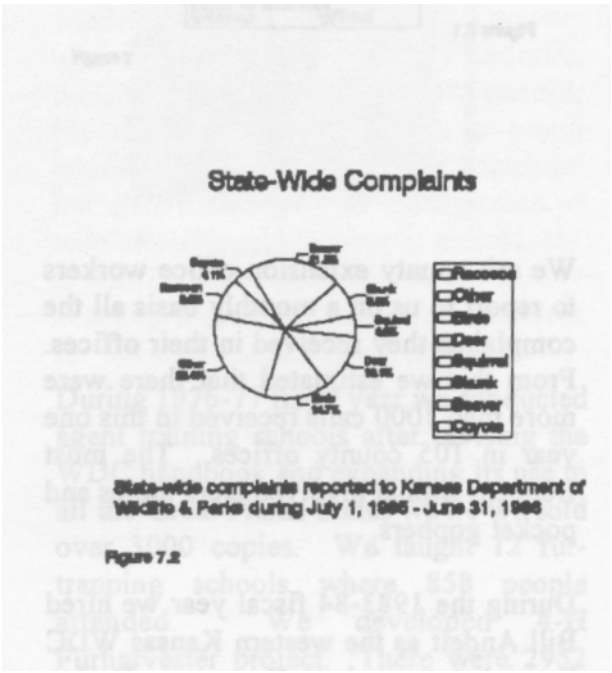
1985
Wildlife Damage Control
Report for Kansas

Categories of Complaints	% Reported by KFG
1. Nuisance	85.75
2. Minor Economic Loss (Up to $300)	35.99
3. Major Economic Loss (Over $300)	10.26

Kansas Fish & Game Commission reported a total of 91.89% complaints from 71 counties.

Cooperative Extension Service reported 1,089 or 88.41% complaints from 18 counties.

Figure 7.2



We wrote a manual for training users of toxicant in ag-related WDC given a separate category of 1-C. Worked with 75 livestock producers with coyote problems (see figures 8 and 9).

1984 Survey

- A total of 93 surveys were returned
- The average age of the producers was 43
- A total of 35 had sought Extension help
- A total of 28 approved of the Extension program
- A total of 37 had coyote/dog problems

- There were 148 lambs lost, the largest number lost to one producers was 20
- There were 124 ewes lost, the largest number lost to one producer was 25
- There were 107 feeder lambs lost, the largest number lost to one producer was 47

Figure 8

1984 Survey, Con't

- The investigator was Kansas Farmer Magazine
- There were a total of 91 surveys returned
- The average loss for rural areas was $500
- The average loss for urban areas was $100

1 Eighty-nine of the producers had problems

Figure 9

In fiscal year 1985-86 several changes started to occur. First Andelt, the Western Kansas Wildlife Damage Control Specialist resigned to take a state specialist job in WDC in Colorado. Soon afterwards, Mississippi kites attacked people on a golf course and near some homes of people during July and August 1986. The state wildlife agency requested assistance from the federal government (USDI-USF&WS) because the birds are protected federally end the federal government refused to permit the state to destroy any of these birds even though particular birds were causing injury to humans.

The USDI-USF&WS contacted the USDA-ADC and requested that they respond to the State Wildlife Agency in Kansas and handle the problems. They responded to 16 Mississippi kite problems that July and August.

During the 1986-87 fiscal year the Extension Specialist, Wildlife Damage Control was transferred to the Department of Animal Science on the Kansas State University campus. We developed a 640-page handbook about methods useful in increasing wildlife on farms and ranches. Work was started on various video tapes to help increase our ability to teach some WDC procedures. We began working with producers who obtained guardian dogs to protect sheep. We were able to hire the first Extension Assistant to help with the WDC program. Mr Charles D. Lee received this appointment. We began studies to determine what could be accomplished in reduction of bird damage at large cattle feedlots.

During the 1987-88 fiscal year we developed 11 video tapes on methods of how to increase wildlife on farms and ranches. These video are in use nation-wide. We started a prairie dog population study in 8 counties in western Kansas where the most land had been enrolled into the CRP program. This study will provide benchmark information for the next ten to twenty years.

During the fiscal year 1988-89, the Extension Specialist's title was changed from Wildlife Damage Control to Animal Damage Control. We developed a nationwide satellite tele-conference about ways of increasing wildlife on farms and ranches. The livestock producers of Kansas reaffirmed their support of the Kansas approach to wildlife problems by passage of the

1991 KLA Policy Resolutions

Wildlife Damage/Department of Wildlife & Parks (1989)

WHEREAS, wild animals, predatory dogs and other predators contribute to a public health hazard and cause significant damage to livestock, crops and grassland, and

WHEREAS, the game management and land management practices of the Kansas Fish & Game Commission have caused an adverse impact on Kansas farmers and ranchers.

THEREFORE, BE IT RESOLVED, the Kansas Livestock Association believes that landowners should be allowed to protect their property from damages caused by wildlife, predatory dogs and hunters.

BE IT FURTHER RESOLVED, the Kansas Livestock Association supports: 1) continued funding for a minimum of two damage control specialists within the Extension, Wildlife Damage Control program at Kansas State University; b) legislation to stiffen penalties for illegal hunter trespass; and c) a requirement that the Department of Wildlife and Parks assume responsibilities for financing programs to control damage resulting from wildlife ***transplant and*** reintroduction programs.

BE IT FURTHER RESOLVED, the Kansas Livestock Association opposes reintroduction or relocation of wildlife species without approval of landowners in the area affected.

The 1990s and Beyond

In October of 1990, a new MOU was signed by state and Federal agencies with mandated responsibilities in Kansas. The Kansas Department of Wildlife and Parks established an office at Kansas State University and established a departmental policy regarding animal damage control. Their policy supports the philosophy that favors educational self-help approaches to wildlife damage control. In figures 10 and 11, the reader can see that Kansas has maintained both sheep and beef cattle numbers. Figure 12 shows the number of coyote complaints per year for the past 25 years.

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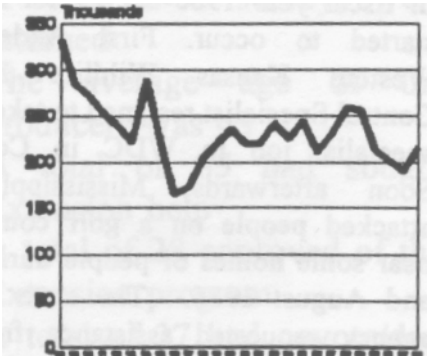

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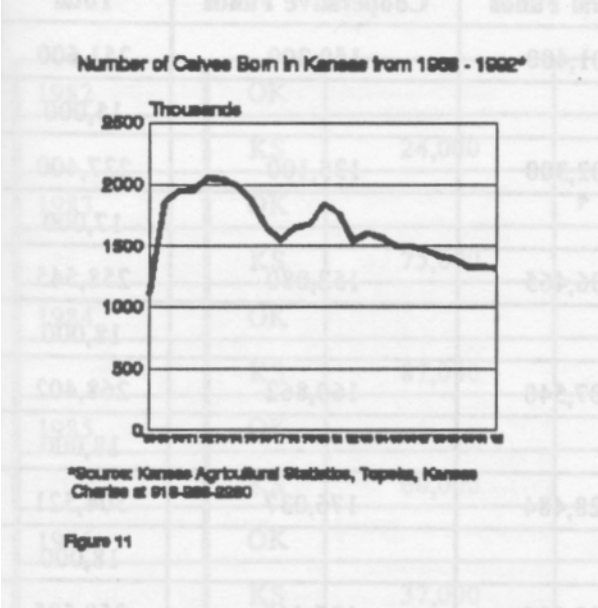

Figure 11

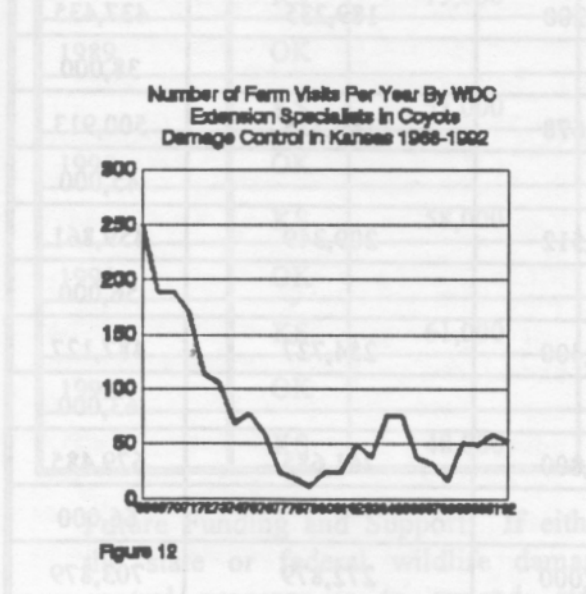

Figure 12

Having been associated with this program during all that time, taught me that people perceive the "coyote problem" to be much more of a problem than I have been able to find in my field work. The Extension program in Kansas was originally designated a coyote damage control program. Over the years, other kinds of wildlife became a bigger problem than coyotes, such as deer, black birds, starlings, beaver, etc. Also because of distances in Kansas and because there are times when livestock producers need extended help in solving rather costly losses to coyotes, it is my opinion that we need to work together to expand the program, not to exceed five field personnel guided by a central office in Manhattan at Kansas State University. Kansas needs one program for all wildlife damage problems. We need an increased importance placed on research. An ideal mechanism to promote needed research would be to establish a Cooperative Wildlife Damage Control Research Unit at Kansas State University in the Department of Animal Sciences and Industry.

It happens that there is an inherent difference in the cost of a "self help" and a "service" program. The Kansas "self help" program is effective statewide because it utilizes the citizens themselves and the services of 105 county agents and an extensive system of trained and certified volunteers, yet direct costs to the state for wildlife damage control specialist are less than $60,000 annually. By contrast, the Oklahoma "service" program costs over $1,000,000 annually. About half those costs are provided by the State of Oklahoma (see figure 13).

Expenditures by the Oklahoma and Kansas ADC Progiarn
FY 1968 - 1992

Fiscal Year	State	State Funds	Federal Funds	Cooperative Funds	Total
1968	OK		101,400	150,200	251,600
	KS	15,000			15,000
1969	OK		102,300	135,100	237,400
	KS	17,000			17,000
1970	OK		106,465	152,080	258,545
	KS	18,000			18,000
1971	OK		107,540	160,862	268,402
	KS	18,000			18,000
1972	OK		128,484	176,037	304,521
	KS	18,000			18,000
1973	OK		113,085	137,440	250,525
	KS	20,000			20,000
1974	OK		145,590	167,985	313,575
	KS	20,000			20,000
1975	OK		248,200	189,235	437,435
	KS	38,000			38,000
1976	OK		311,678	189,235	500,913
	KS	45,000			45,000
1977	OK		250,512	209,349	459,861
	KS	56,000			56,000
1978	OK		232,400	254,727	487,127
	KS	63,000			63,000
1979	OK		417,800	261,685	679,485
	KS	66,000			66,000
1980	OK		431,000	272,879	703,879
	'KS	68,000			68,000
1981	OK		461,000	275,494	736,494
	KS	68,000			68,000

Expenditures by the Oklahoma and Kansas ADC Program

1982	OK		420,000	417,867	838,267
	KS	24,000			24,000
1983	OK		431,000	431,111	862,111
	KS	75,000			75,000
1984	OK		445,000	455,585	900,585
	KS	87,000			87,000
1985	OK		608,000	522,757	1,130,757
	KS	60,000			60,000
1986	OK		592,400	567,370	1,159,770
	KS	37,000			37,000
1987	OK		530,400	488,750	1,019,150
	KS	72,000			72,000
1988	OK		516,280	479,287	995,567
	KS	75,000			75,000
1989	OK		593,377	595,057	1,188,434
	KS	51,000			51,000
1990	OK		678,547	617,455	1,296,002
	KS	58,000			58,000
1991	OK		712,954	645,000	1,357,954
	KS	61,000			61,000
1992	OK		756,594	660,032	1,416,620
	KS	48,000			48,000

Future Funding and Support: If either the state or federal wildlife damage control program is to expand, state support will likely be required. Colocating the two programs at Manhattan would do much to insure that future funding requests were mutually supportive rather than competitive; that the training and agent resources available to KSU were maximally available to ADC; that the services offered by ADC were maximally available to the citizens

of the entire state.

Once again in early 1993, we went to the livestock producers and asked them to evaluate the Kansas program. We developed a list of 2,400 producers who had received training in the last 24 years. We divided these into 104 of the 105 counties. We asked the county ag agents to pick 3 people at random per county or a total possible of 298 producers and asked them a set of questions. We received 173 replies. Here are the results:

1993 Survey to Livestock Producers

Total Possible responses = 298
Total responses = 173
Total Response Rate = 58%

- Got information from 66 of the 104 counties (Leavenworth had nobody to survey) = 63%
- 61 % of the respondents had an

86% of respondents felt that the damage control specialist was successful at teaching them how to reduce their predator problems.

Yet, 69% of the respondents felt capable of solving future problems.

68% of the respondents took preventive measures prior to *contacting K-State* Damage Control.

Six of the respondents rated the program poor, 87 rated it very good, 65 rated it good, and 11 rated it fair.

1 = poor 2 = fair
3 = Good 4 = Very Good
571 = 3.38 overall rating
169

- 87% of the respondents had either a sheep or cow/calf operation: 44% sheen; 43% cow/calf; Poultry 5%; Swine 6%; and Other gamebirds) 2%.

The Kansas ADC program continues to maintain ties with the Kansas Department of Wildlife and Parks, producer groups, and conservation orgainizations. It is the hope of the author that someday Kansas could have a Cooperative Animal Damage Control Research Unit at KSU in the Animal Science Department. Also, it is important for APHIS and Kansas to incorporate the strong points of each program into a better program not yet in existence.

Summary

This paper provides a detailed review of the history of coyote damage control in Kansas. The people of Kansas have experimented with many methods to cope with coyotes and an educationalself help program has evolved that has served the people of Kansas well for more than 40 years. Our state educational program began in 1949. Between 1968 and 1993, the Kansas state program has reduced coyote losses while a stable coyote population existed (see figure 14).

Kansas needs to increase its financial commitment to this program as problems with other wildlife species are much more numerous than are coyote problems. Kansas livestock producers should have access to all legal control measures and the state should provide a maximum of five area animal damage control specialists. Research is also needed to find better ways to minimize conflicts between people and wild animals. An ideal mechanism to promote needed research would be to establish a Cooperative Wildlife Damage Control Research Unit with APHIS-ADC support

There were individual problems on a few farms where at the time our self-help program seemed to be lacking, but in all cases, those problems were solved. The keys to the success in Kansas are listed in figure 15.

Key to Success in Kansas

- Strong administrative backing
- Enabling legislation
- Volunteers '
- Extension network
- Lack of duplicate programs
- Understanding clientele
- Not limited to WDC work